

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A thermal energy management system comprising:
a heat spreading device that is operatively engaged with at least one heat generating component; and
a thermal bus that is operatively engaged with said heat spreading device so as to transport thermal energy from said heat spreading device to a heat sink.
2. (Original) A thermal energy management system according to claim 1 wherein said heat spreading device comprises a heat pipe and said thermal bus comprises a loop thermosyphon.
3. (Original) A thermal energy management system according to claim 1 including a second thermal bus that is operatively engaged with said first thermal bus so as to transport thermal energy from said first thermal bus to a heat sink.
4. (Original) A thermal energy management system according to claim 3 wherein said second thermal bus comprises a loop thermosyphon.
5. (Original) A thermal energy management system according to claim 1 wherein said heat spreading device comprises a planar heat pipe

arranged in thermal communication with said thermal bus so as to transport thermal energy away from said at least one heat generating component wherein said planar heat pipe is sized and shaped so as to spread thermal energy over an area larger than the area of said at least one heat generating component.

6. (Original) A thermal energy management system according to claim 1 wherein said heat spreading device comprises a planar heat pipe including a vapor chamber that is defined between a top wall formed from a substantially uniform thickness sheet of a thermally conductive material and a bottom wall comprises a substantially uniform thickness sheet of a thermally conductive material.

7. – 8. (Cancelled)

9. (Original) A thermal energy management system according to claim 1 wherein said thermal bus comprises at least one loop-thermosyphon that is thermally engaged with said heat spreading device so as to bus thermal energy to a thermal energy sink.

10. (Original) A thermal energy management system according to claim 1 wherein said thermal bus comprises a loop thermosyphon formed from a closed tube having a continuous internal passageway and at least an evaporator portion including an integrally formed wicking layer disposed on the surface of

said tube that defines said internal passageway adjacent to said evaporator portion.

11. (Original) A thermal energy management system according to claim 10 wherein said wicking layer comprises sintered copper powder having an average thickness of about 0.5 mm to 2.0 mm.

12. (Original) A thermal energy management system according to claim 9 wherein said loop thermosyphon comprises a condensing portion positioned in spaced away relation to an evaporator portion.

13. (Original) A thermal energy management system according to claim 1 wherein a portion of said thermal bus is arranged in intimate thermal contact with a wall of a support chassis.

14. (Original) A thermal energy management system according to claim 13 wherein said thermal bus is maintained in position by a simple fastening system so that it may be disassembled from an underlying electronic system and components.

15. (Original) A thermal energy management system according to claim 13 further comprising a second thermal bus positioned adjacent to a condensing portion of said thermal bus.

16. (Cancelled)

17. (Original) A thermal energy management system comprising:
a heat pipe heat spreader that is thermally engaged with at least one heat generating component; and
an evaporator plate positioned between a portion of said heat pipe heat spreader and an evaporation portion of a loop thermosyphon so as to transport thermal energy from said heat pipe heat spreader to a heat sink.

18. (Original) A thermal energy management system according to claim 17 wherein said evaporator plate provides a physical and thermal interface between a top wall of said heat pipe heat spreader and said evaporator portion of said loop-thermosyphon.

19. (Original) A thermal energy management system according to claim 17 wherein said evaporator plate is formed from a substantially uniform thickness sheet of a thermally conductive material that is sized and shaped to cover a portion of said top wall.

20. (Original) A thermal energy management system according to claim 19 wherein said at least one groove is formed in a top surface of said

evaporator plate so as to receive and cradle said evaporator portion of said loop-thermosyphon.

21. (Original) A thermal energy management system comprising:
a heat pipe heat spreader that is operatively engaged with at least one heat generating component;

an evaporator plate positioned between a portion of said heat pipe heat spreader and an evaporation portion of a first loop thermosyphon so as to transport thermal energy from said heat pipe heat spreader to a heat sink; and

a second evaporator plate positioned between a condensing portion of said first loop thermosyphon and an evaporator portion of a second loop thermosyphon.

22. and 23. (Cancelled)

24. (Original) A method of managing thermal energy in an electronic system comprising:

spreading thermal energy generated by one or more devices over a surface that is relatively larger than said devices;

thermally coupling an evaporator portion of a loop thermosyphon to said surface; and

thermally coupling a condensing portion of said loop thermosyphon to a thermal energy sink.

25. (Original) A method of managing thermal energy in an electronic system comprising:

- spreading thermal energy generated by one or more devices over a surface that is relatively larger than said devices;
- thermally coupling an evaporator portion of a loop thermosyphon to said surface; and
- thermally coupling a condensing portion of said loop thermosyphon to an evaporator portion of a second loop thermosyphon.